

### **REMARKS**

Claims 1-20 are pending in the above-identified application. The formulas in claims 2 and 3 have been corrected in response to the objections addressed below. Claims 16-18 and 20 have also been amended so as to properly depend from claims 2, 3 and 1, respectfully, in response to the objections addressed below.

#### *Requested for Entry of Claim Amendments*

Claims 1-3 have been amended so as to insert minor corrections to the formulas. Claims 16-18 and 20 have been amended so as to each properly depend from one claim. All of these changes have been made based on the objections addressed below, such that these are requirements of "form" and should be entered of record pursuant to 37 CFR 1.116(b). Further, these changes raise no new issues and at least place the present claims into better form for consideration on appeal, such an appeal be necessary.

#### *Removal of Bases of Claim Objections*

Claim 2 has been objected to because the substituent "X<sup>2</sup>" is shown to be too close to the chemical bond. Claim 3 has been objected to because of the improper abbreviation for a chloro substituent. Claims 16, 17 and 20 have been objected to under 37 CFR 1.75(c) as improperly depending from more than one claim.

In response to the above-noted objections, the formulas in claims 2 and 3 have been corrected. The formula in section (B) of claim 1 has also been corrected. Additionally, claims 16, 17 and 20 have been amended such that these claims properly depend from one base claim. Further, claim 18 has been amended so as to be consistent with the changes to claims 16 and 17. As noted, it is submitted all of these changes raise no new issues and should be entered and considered by the Patent Examiner. It is therefore, requested that the above-noted rejections be withdrawn.

Issues under 35 USC 103(a)

Claims 1-9, 11-15, 18 and 20 have been rejected under 35 USC 103(a) as being unpatentable over WO '607 (WO 98/466067) and Eicken '493 (USP 5,589,493) in view of the "acknowledged prior art". This rejection is traversed based on the following reasons.

The essential position of the Examiner is stated at the paragraph bridging pages 4-5 of the Office Action. Basically, the Examiner asserts that each of the WO '607 and Eicken '493 references disclose one of the two compounds combined in the composition of the present invention and that each of these references disclose that these compounds may be combined with a variety of other fungicidal compounds to similarly treat pathogenic fungi using similar application rates and similar formulations. That is, that the Examiner states that a person of ordinary skill in this technological area would have been motivated to combine the fungicides of WO '607 and Eicken '493 together in order to obtain the benefits of both fungicides. Finally, the Examiner criticizes the comparative experimental test results because these test only address two particular compounds, i.e., Compound I and Compound II-5.

Summary of Present Invention

The present invention is directed to the combination of: (A) a triazolopyrimidine of formula I encompassing only one specific compound; and (B) amide compounds of formula II which encompasses a relatively small sub-genus. Note that the compounds of formula I include: (1) a triazolopyrimidine fused ring system, (2) a pyridine ring; and (3) a trifluoro-substituted phenyl ring. Note that the structural features of the amide compounds of formula II include: (1) a substituted pyridine ring; and (2) a substituted by biphenyl ring system.

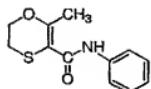
Failure of Cited References to Establish Prima Facie Case of Obviousness

The reasons stated in the Final Office Action on the combination of WO '607 and Eicken '493 fail to provide an adequate basis for alleging obviousness in view of the reasons below.

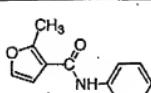
WO '607 discloses the triazolopyrimidine compound of formula I used in the fungicidal mixture of the present invention. However, WO '607 fails to provide any reasonable suggestion to one skilled in the art to combine the described compounds with any compound having a

structure even remotely similar to the compounds of Eicken '493. WO '607 discloses at pages 17-18 approximately 150 potential compounds which may be used together with the described triazolopyrimidine compounds. From among these disclosed compounds, the compounds having chemical structures closest to the relevant compounds of the sub-genus of formula II recited in the claims of the present application are the following:

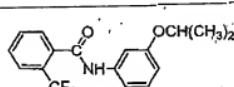
carboxin:



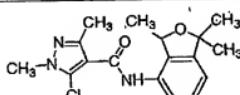
fenfuram:



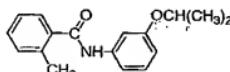
flutolanil:



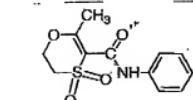
furametpyr:



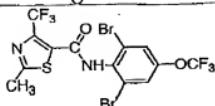
mepronil:



oxycarboxin:



thifluzomide:



It is clear from a review of the structures of the above compounds disclosed by WO '607 that all of these compounds fail to include either a pyridine ring or a biphenyl ring system, which are both required for the amide compounds of formula II of the present claims. In other words, WO '607 fails to disclose any compound which may possibly be combined with the described triazolopyrimidine compounds that has a structure even remotely similar to the structure of the sub-genus of amide compounds of formula II in the present claims.

Eicken '493 discloses a very large genus of anilide and amide compounds which may be combined with a list of about 80 fungicides as listed at columns 35-37. The compounds that are listed as potentially combinable in Eicken '493 fail to include any examples which have a triazolopyrimidine fused ring system as required by the compound of formula I of the mixture of the present invention. Thus, Eicken '493 fails to disclose any potential combinable compounds which have a chemical structure even remotely suggesting the structure of the triazolopyrimidine compound of formula I of the present invention.

Eicken '493 discloses a very large genus from which a small sub-genus of amide compounds has been selected for formula II recited in the present claims. Thus, one skilled in the art must select the small sub-genus of compounds of formula II from the large genus described in Eicken '493, but without any specified directions to do so. The Final Office Action fails to provide any evidence for this step in the selection process.

The reasons stated in support of the alleged prima facie obviousness at the paragraph bridging 4-5 of the Final Office Action fall far short of supporting the asserted rejection. The fact that the single compound of formula I and the small sub-genus of compounds of formula II are known fungicides which are known to be used together with other fungicides and have similar formulation properties merely supports the conclusion that the tens of thousand of compounds from the large genus of Eicken '493 may be combined with at least almost 80 other compounds which do not have required significant chemical structural features of the triazolopyrimidine compound of formula I of the present claims or any of the related compounds in WO '607. In addition, it can only be argued that the various triazolopyrimidine compounds of WO '607 may be combined with almost 150 other compounds which fail to include either the pyridine ring or

biphenyl ring system required by the sub-genus of compounds of formula II and selected from within the vary large genus of compounds described by Eicken '493.

In view of the above, the references cited in support of the rejection fall far short of establishing prima facie obviousness such that the above-noted rejection should be withdrawn. *In re Veck* 20 USPQ2d 1438 (Fed. Cir. 1991); MPEP 2143. Thus, the focus in the Final Office Action on the scope of the comparative test results provided in the present application is misguided or misplaced. Since there is no prima facie basis for alleging obviouness in the first place, the Applicant is not required to provide evidence of unexpected, advantageous properties.

Evidence in Support of Rebuttal of Rejection

As noted above, none of the prior art cited by the Examiner shows or suggests a combination as recited in independent claim 1 of the instant invention. Accordingly, it is respectfully submitted that the present application is in condition for allowance.

However, assuming arguendo that the Examiner has made a prima facie case of obviousness under 35 U.S.C. 103, it is noted that Applicants have provided evidence of unexpected results that rebut such obviousness. When a chemical composition is claimed, a prima facie case of obviousness under § 103 may be established by the citation of a reference to a similar composition, the presumption being that similar compositions have similar properties. See *In re Dillon*, 919 F.2d 688, 692 (Fed. Cir. 1990) (en banc). One way for a patent applicant to rebut a prima facie case of obviousness is to make a showing of "unexpected results," i.e., to show that the claimed invention exhibits some superior property or advantage that a person of ordinary skill in the relevant art would have found surprising or unexpected. The basic principle behind this rule is straightforward -- that which would have been surprising to a person of ordinary skill in a particular art would not have been obvious. *In re Soni*, 54 F.3d 746, 750 (Fed. Cir. 1995).

The instant invention is directed to methods for controlling harmful fungi. As disclosed by Applicants, the compounds of formula I and formula II have been known in the art for a

number of years. However, until Applicants' research studies, they had never been combined before.

Applicants have provided the results of studies that are reproducible, include comparative data vis a vis controls or untreated specimens and, furthermore, are analyzed using analytical methods accepted by the scientific community, such as the Abbot and Colby methods.

As evidenced by Tables B and D in Applicant's Specification, one of ordinary skill in the art at the time of the invention would not have been motivated to combine the fungicide of formula I with the amine compound of formula II, because the expected efficacy of such a combination would have been very low, in some cases 0%. However, Applicants have discovered that the mixture of these compounds unexpectedly produces a synergistic effect, with mixture efficacies of up to 100% at certain specific concentrations (See Table D, Example 11). Applicants' evidence demonstrates significantly improved and unexpected results. When an applicant demonstrates substantially improved results and states that the results were unexpected, this is sufficient to establish unexpected results in the absence of evidence to the contrary. *In re Soni*, 54 F.3d 746, 751 (Fed. Cir. 1995). Furthermore, given a presumption of similar properties for similar compositions, substantially improved properties are ipso facto unexpected. *Id.*

#### Conclusion

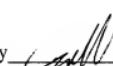
All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Prompt and favorable consideration of this Amendment is respectfully requested.

If any questions arise in the above matters, please contact Applicant's representative, Andrew D. Meikle (Reg. No. 32,868), in the Washington Metropolitan Area at the phone number listed below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

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